

## **REMARKS**

Claims 1-40 have been cancelled. The title and specification have been amended for clerical reasons; no new matter has been added through these amendments. New claims 41-57 have been added. No new matter has been added through the addition of these new claims. New claims 41-57 find support at, for example, pages 7-11 of the specification. Applicant requests consideration of these new claims.

The previously pending claims 1-40 were rejected as obvious over Fujii and Inoue. Such rejections are believed to be overcome by submission of new claims 41-57.

Claim 41 is believed allowable for at least the reason that it recites a method of forming a conductive line that includes forming a silicide-comprising layer over a silicon-comprising layer having a dopant therein; and further recites, after forming the silicide-comprising layer, out-diffusing the dopant from the silicon-comprising layer to the silicide-comprising layer to provide the dopant within the silicide-comprising layer to a concentration of at least about  $1 \times 10^{18}$  ions/cm<sup>3</sup>.

The cited references do not teach or suggest the recited features of claim 41. For example, Fujii describes a method of forming a silicide layer over a doped silicon layer that includes ion implanting the silicide layer after it is formed over the silicon layer. Fujii indicates at column 4, lines 35-40 that the diffusion of boron ions (ions implanted) from the later silicon layer to the former silicide layer should be prevented. Fujii thereby teaches away from out-diffusing between a silicon-comprising layer and silicide-comprising layer as recited in claim 41 and certainly does not disclose or suggest utilizing out-diffusion to achieve a concentration of dopant within the silicide of at least about  $1 \times 10^{18}$  ions/cm<sup>3</sup>.

Inoue indicates implanting ions via a photolithographic method but does not mention out-diffusing. For at least these reasons, claim 41 is allowable over the cited references.

Claims 42-48 depend from claim 41 and are allowable for at least the reasons discussed above regarding claim 41.

Claim 49 recites a method of forming a conductive line that includes forming a silicon-comprising layer over a semiconductor substrate and forming a silicide-comprising layer over the silicon-comprising layer with the silicide-comprising layer having a dopant concentration less than  $1 \times 10^{18}$  ions/cm<sup>3</sup>. Claim 50 further recites, while the dopant concentration in the silicide-comprising layer is than  $1 \times 10^{18}$  ions/cm<sup>3</sup>, etching the silicon-comprising layer and the silicide-comprising layer into a conductive line shape and, after the etching, providing a dopant within the silicide-comprising layer to a concentration greater than  $1 \times 10^{18}$  ions/cm<sup>3</sup>.

The cited references either alone or in combination do not teach or suggest providing a dopant within the silicide-comprising layer after etching. For at least this reason, claim 50 is allowable and applicant requests allowance of claim 50 in the Examiner's next action.

Claims 51-57 depend from claim 49 and are allowable for at least the reasons discussed above regarding claim 49.

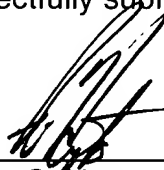
Furthermore, new claim 52 recites the limitations of claim 49 including forming an oxide layer over the silicide-comprising layer prior to the etching with the oxide layer and the silicide-comprising layer having thicknesses. Claim 52 further recites that the oxide layer thickness is less than one-half of the silicide-comprising layer thickness. The cited

references, either alone or in combination do not teach or suggest this limitation. For at least this reason claim 52 is allowable.

Having addressed all of the issues raised by the Examiner in the last action and having proffered the patentability of new claims, claims 41-57 are believed to be in immediate condition for allowance. Applicant requests allowance of claims 41-57 in the Examiner's next action.

Respectfully submitted,

Dated: 12/12/03

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